

## STEPHEN E. SCHWARTZ

## CURRICULUM VITAE

**Present Position** Senior Scientist  
Atmospheric Sciences Division, Building 815E  
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**Professional Experience** Brookhaven National Laboratory: Associate Scientist, 1975-77; Scientist, 1977-90; **Senior Scientist**, from 1990. State University of New York at Stony Brook: Assistant Professor (Chemistry), 1969-75; Adjunct Professor (Institute for Terrestrial and Planetary Atmospheres) 1994-97. Energieonderzoek Centrum Nederland (Netherlands Energy Research Foundation, ECN) Visiting Scientist, 1996.

**Principal Honors** Fellow, American Association for the Advancement of Science, 2002; Fellow, American Geophysical Union, 2005; Haagen-Smit Award for outstanding paper in *Atmospheric Environment*, 2003; ISI Highly Cited Researcher, Thompson Scientific, 2006; Sigma Xi, 1969 (University of California, Berkeley); Phi Beta Kappa, 1963 (Harvard).

**Research** **Atmospheric science and climate change:** Earth energy budget and climate; aerosol influences on climate and climate change; atmospheric radiation; field measurements and interpretation; large scale atmospheric chemical transport modeling of gas-phase and multi-phase processes; cloud and aerosol chemistry and microphysics. **Physical chemistry:** Laboratory studies of gas- and aqueous-phase kinetics.

**Doctoral Supervision** Thesis advisor, SUNY Stony Brook (2); Co-supervisor, New York University; Advisor, Florida State University; Opponent, University of Stockholm; Member of committee, SUNY Stony Brook (2), Wageningen University (Netherlands), University of Leipzig.

**Career Publications**

Book	1
Books (edited)	2
Journal articles and book chapters	130
Proceedings and abstracts	225
Reports and reviews	45

**Professional Society Membership** American Association for the Advancement of Science; American Chemical Society and its Physical and Environmental Divisions; American Geophysical Union; American Physical Society; American Meteorological Society; American Association for Aerosol Research; European Geosciences Union, Gesellschaft für Aerosolforschung; International Union for Pure and Applied Chemistry (Fellow).

**Education** **Harvard College** (A.B., Chemistry, 1963, Magna cum Laude).  
**University of California, Berkeley** (Ph.D., Chemistry, 1968, with H. S. Johnston). NSF Graduate Fellow (1963-67); Woodrow Wilson Fellow (hon., 1963-64).  
*Thesis:* Kinetics of Nitrogen Dioxide Fluorescence  
**University of Cambridge, England** (Postdoctoral Fellow, 1968-69 with B. A. Thrush). Fulbright Fellow. Ramsay Memorial Fellow (hon.).

**Personal** Born June 18, 1941, St. Louis, Mo. Married; two grown children. Home Address: 12 Mallard Drive, Center Moriches, N.Y. 11934. Telephone: 631-878-4880

**Science leadership**

Chief Scientist, Atmospheric Science Program, U.S. Department of Energy (DOE), 2004-09.

Lead Scientist, Tropospheric Aerosol Program, DOE, 2000-04.

Science Board, ARM (DOE Atmospheric Radiation Measurement Program) Climate Research Facility, 2004-06.

Management Team, Atmospheric Radiation Measurement (ARM) Program, DOE, 1990-99.

Steering Committee, ACE-2 (Aerosol Characterization Experiment: Radiative Forcing due to Aerosols over the Polluted North Atlantic Region), 1993-97.

**Committees and public service**

Climate Change Science Program (U.S.). Co-editor and coauthor of several chapters of "Atmospheric Aerosol Properties and Impacts on Climate, "Synthesis and Assessment Product 2.3, 2009..  
<http://downloads.climate-science.gov/sap/sap2-3/sap2-3-final-report-all.pdf>

Intergovernmental Panel on Climate Change, Contributing author, "Couplings Between Changes in the Climate System and Biogeochemistry" in *Climate Change 2007--The Physical Science Basis*; Contributing author, "Aerosols, their Direct and Indirect Effects" and "Radiative Forcing of Climate Change" in *Climate Change 2001--The Scientific Basis*; Contributing author, "Aerosols" in *Climate Change 1994*; Contributing author, "Radiative Forcing of Climate" in *Climate Change 1992*.

American Geophysical Union, Committee on Global Environmental Change, 1994-98, and Climate Change Panel, 1998. This committee and panel drafted the 1998 AGU Position Statement "Climate Change and Greenhouse Gases" *Eos Trans. Amer. Geophys. Un.* **80**, 49 (1999); <http://www.aip.org/fyi/1999/fyi99.012.htm>.

President, Brookhaven Organization of Scientists, 1997-99.

Invited witness, Science Concerning Global Climate Change, Committee on Energy and Natural Resources, U. S. Senate, Washington, DC, 1994.

Mission to Washington--Joint Appeal by Religion and Science for the Environment, Invited participant, U. S. Senate, Washington DC, 1992.

International Union of Pure and Applied Chemistry, Commission on Atmospheric Chemistry, Associate Member, 1991-94; Titular Member, 1995-98; Co-author, "Units for use in atmospheric chemistry," Schwartz, S. E. and Warneck, P., *Pure Appl. Chem.* **67**, 1377-1406 (1995); .Interdivisional Committee on Nomenclature and Symbols, 1998- 2003.

National Research Council, Committee on Atmospheric Chemistry, 1988-91; Panel on Atmospheric Effects of Stratospheric Aircraft, 1993.

U.S. National Acid Precipitation Assessment Program, Primary co-author, "Atmospheric Process Research and Development", Report 2 of *Acidic Deposition: State of Science and Technology*, 1991.

American Meteorological Society, Committee on Atmospheric Chemistry, 1985-91; principal author of AMS Statement on Acid Deposition, *Bull. Amer. Meteorol. Soc.* **70**, 1039-1040 (1989).

**Editorial**

Advisory Board, *Tellus B*, 1997-2003.

Editorial Advisory Board, *International Journal of Chemical Kinetics*, 1993-95.

North American Editor/Chemistry and Editorial Advisory Board, *Urban Atmosphere*, 1991-95.

Associate Editor, *Journal of Geophysical Research - Atmospheres*, 1986-89.

Associate Editor, *Atmospheric Environment*, 1984-95.

**Conference organization**

Co-Convener, Symposium on Physical and Atmospheric Chemistry in Honor of Harold Johnston, American Chemical Society, Division of Physical Chemistry, San Francisco CA, 2000.

Steering Committee, Sixth International Conference on Air-Surface Exchange of Gases and Particles, Edinburgh, UK, 2000.

Co-chair, Gordon Research Conference, Atmospheric Chemistry, Newport RI, 1995.

Co-chair, Fifth International Conference on Precipitation Scavenging and Atmosphere-Surface Exchange Processes, Richland WA, 1991, and Coordinator (with W.G.N. Slinn) of proceedings, *Precipitation Scavenging and Atmosphere-Surface Exchange*, (Hemisphere, Washington DC, 1992).